

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) An alignment tool for an adaptive cruise control sensor subsystem, comprising:

an illumination source;

an illumination axis defined by said illumination source;

a plurality of gauge pins;

a plurality of distal ends of said gauge pins;

a plane defined by said distal ends, wherein said plane is orthogonal to said illumination axis; ~~and~~

a body to which said illumination source, and said plurality of gauge pins are attached;

and

a plurality of retaining hooks, wherein each of said retaining hooks further comprises:

an oblong center section;

an offset end that can move parallel to a long axis of said oblong center section;

a gripping tip; and

a handle.

2. (Original) The alignment tool of Claim 1, wherein said illumination source further comprises a laser.

3. (Original) The alignment tool of Claim 2, wherein said laser further comprises direction adjustment fittings.

4. (Original) The alignment tool of Claim 1, wherein said illumination source further comprises self-contained battery operation.
5. (Original) The alignment tool of Claim 1, wherein said illumination source further comprises power from at least one remote electrical source.
6. (Original) The alignment tool of Claim 1, wherein said illumination source further comprises attachment to said body by a male screw thread integral to said illumination source.
7. (Original) The alignment tool of Claim 6, wherein said male screw thread further comprises a screw thread axis collinear with said illumination source axis.
8. (Original) The alignment tool of Claim 1, wherein said illumination source further comprises attachment to said body by at least one female screw thread integral to said illumination source.
9. (Original) The alignment tool of Claim 1, wherein said alignment tool further comprises a compressive sleeve attaching said illumination source to said body by surrounding said illumination source at least in part and applying clamping force to said illumination source.
10. (Original) The alignment tool of Claim 1, wherein said gauge pins are further comprised of one of tool steel, stainless steel, ceramic, ceramic-coated metal, aluminum alloy, spring metal alloy, unfilled engineered plastic, and filled engineered plastic.
11. (Original) The alignment tool of Claim 1, wherein said gauge pins are further comprised of a material of durability no less than that with which said gauge pins make contact when in use.

12. (Original) The alignment tool of Claim 1, wherein said gauge pins screw into one of threaded holes in said body, threaded inserts in said body, and threaded nuts located beyond unthreaded apertures in said body.

13. (Original) The alignment tool of Claim 1, wherein said gauge pins attach to said body by one of co-molding, vibroinsertion, differential temperature interference fitting, and press fitting.

14. (Original) The alignment tool of Claim 1, wherein said gauge pins are formed integrally with said body.

15. (Canceled)

16. (Canceled)

17. (Currently amended) ~~The alignment tool of Claim 15~~ An alignment tool for an adaptive cruise control sensor subsystem, comprising:

an illumination source;

an illumination axis defined by said illumination source;

a plurality of gauge pins;

a plurality of distal ends of said gauge pins;

a plane defined by said distal ends, wherein said plane is orthogonal to said illumination axis;

a body to which said illumination source and said plurality of gauge pins are attached;

and

a plurality of retaining hooks, wherein each of said retaining hooks further comprises:

a spring applying force to draw said offset end toward said body;
a body bearing surface on said body against which said spring can bear; and
a hook bearing surface on said hook against which said spring can bear.

18. (Currently amended) ~~The alignment tool of Claim 15~~ An alignment tool for an adaptive cruise control sensor subsystem, comprising:

an illumination source;

an illumination axis defined by said illumination source;

a plurality of gauge pins;

a plurality of distal ends of said gauge pins;

a plane defined by said distal ends, wherein said plane is orthogonal to said illumination axis;

a body to which said illumination source and said plurality of gauge pins are attached;

and

a plurality of retaining hooks, wherein each of said retaining hooks further comprises a locking cam to hold said retaining hook in position.

19. (Currently amended) The alignment tool of Claim [[15]] 1, wherein each of said retaining hooks is able to rotate.

20. (Original) An alignment tool for an adaptive cruise control sensor subsystem, comprising:

means for illuminating a target;

means for establishing an illumination axis defined by said illumination means;

means for making simultaneous physical contact with a plurality of coplanar reference surfaces on an adaptive cruise control sensor subsystem;

means for establishing orthogonality between a plane defined by said means for making contact and the illumination axis defined by said illuminating means, wherein said orthogonality occurs at the center of emission of the adaptive cruise control sensor subsystem being aligned; and

means for combining said means for illuminating and said means for making contact in a unitary assembly.

21. (Original) The alignment tool of Claim 20, further comprising means for affixing said alignment tool to said sensor subsystem, wherein said means for affixing affords hands-free usage of said alignment tool.

22. (Original) The alignment tool of Claim 20, further comprising means for affixing said alignment tool to said sensor subsystem, wherein said means for affixing uses spring-loaded clamping fittings.

23. (Currently amended) The alignment tool of Claim 20, further comprising means for adjusting said means for ~~establishing orthogonality~~ illuminating, wherein said means for adjusting uses integral adjusting screw fittings.

24. (Currently amended) The alignment tool of Claim 20, further comprising means for adjusting said means for ~~establishing orthogonality~~ illuminating, wherein said means for adjusting provides said adjusting through changes in the positions of said means for making contact.

25. (Original) A method for aligning an adaptive cruise control sensor subsystem on a vehicle, comprising the steps of:

defining a target at which an axis of radiation of the adaptive cruise control sensor subsystem should point;

establishing an illumination axis defined by a light beam on an alignment tool;

contacting a plurality of coplanar reference surfaces on the adaptive cruise control sensor subsystem, perpendicular to the axis of radiation of the adaptive cruise control sensor subsystem;

establishing orthogonality between a plane defined by contacting the plurality of coplanar reference surfaces on the adaptive cruise control sensor subsystem and a line defined by establishing an illumination axis; and

adjusting the orientation of the plurality of coplanar reference surfaces on the adaptive cruise control sensor subsystem until the target coincides with the illuminated spot.

26. (Original) The method for aligning adaptive cruise control sensor subsystem of Claim 25, further comprising affixing the alignment tool to the sensor subsystem, wherein the affixing affords hands-free usage of the alignment tool.

27. (Original) The method of Claim 25, further comprising affixing the alignment tool to the sensor subsystem, wherein the affixing uses spring-loaded clamping fittings.

28. (Original) The method of Claim 25, further comprising adjusting the alignment of the axis of the adaptive cruise control sensor subsystem subject to guidance afforded by the alignment tool, wherein the adjusting uses integral adjusting screw fittings.